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REMARKS

Objection to Claim 1

The Examiner has objected to Claim 1 for informalities for "end date" in line 25. Applicants have amended it to "end data" as requested by the Examiner.

Rejection of Claim 5 under 35 USC § 112

The Examiner has objected to Claim 5 for improper antecedent basis for "said application server" in line 11. Applicants have cancelled Claim 5 and added similar Claim 11 with proper antecedent basis.

Rejection of Claims 1 and 5 under 35 USC § 102(e)

The Examiner has rejected Claims 1 and 5 as being anticipated by Hawkins (US Pub. No. 2001/0032254). Applicants respectfully disagree.

The prior art disclosed by Hawkins in a method and apparatus for wireless Internet access. The focus of Hawkins is radio transmission for handheld devices to access Internet information over relatively low bandwidth networks and associated problems – i.e., the severely limited bandwidth and high power requirements of a wireless radio. To overcome this, Hawkins introduces methods for reducing the amount of traffic sent over the wireless link for web access. (see paragraphs [0007], [0018], [0034], and [0046] of Hawkins). Further, paragraph [0071] makes it clear that the methods of Hawkins involve compression techniques that enable a wireless handheld computer to complete a web based information request using only one packet up to a proxy server and only one packet back down to the wireless communications device.

The proxy server of Hawkins along with the wireless communications device use compact markup language and compressed web pages (see paragraph [0090]) and a browser that functions with a reduced amount of data in a manner known as thin browsing (see paragraph [0096]). Clearly, the device of Hawkins would not enable robust functionality of any web-

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based applications (e.g., programs related to storage, access, modification, and retrieval of personal calendars, banking transactions, e-mail, telephone messages, appointments, or contact lists) on a wireless communications device. Indeed, Hawkins is not concerned with the underlying functionality of a web-based application. Rather, Hawkins is concerned with low-bandwidth wireless transmission of web page content for display on the wireless communications device. Accordingly, the point of Hawkins is to enable wireless transmission of as much data as possible from any given web-page to a single wireless communications device.

In sharp contrast to the Hawkins disclosure, the present invention seeks to provide ubiquity of any web-based application for any number of varied end-user devices. Such web-based applications are more than raw web-page content as discussed in Hawkins. Rather, the web-based applications are programs related to storage, access, modification, and retrieval of personal calendars, banking transactions, e-mail, telephone messages, appointments, contact lists or the like as discussed at page 1, line 20 and page 3, line 7 of Applicants' originally filed specification. Such varied end-user devices of the present invention include, but clearly are not limited to, wireless communications devices (see page 7, lines 1-16). Accordingly, while Hawkins discloses a way of wirelessly transmitting web-page content to a wireless communications device, the present invention enables the web-based application underlying the web-page content to be utilized in a ubiquitous manner across any number of various end-user devices. Indeed, Applicant respectfully submits that the prior art of Hawkins and the present invention are entirely different in their function and purpose.

Claim 1 has been amended to clarify the point that the present invention is directed to the integration of multiple types of end user devices for accessing multiple Internet-based applications through the Internet. The end user devices are diverse devices such as Wireless Application Protocol (WAP) enabled mobile telephones, palmtop computers, PSTN telephones and personal digital assistants (PDAs). The Internet-based applications are multiple applications which allow such diverse devices to access diverse functions through the Internet. The purpose of the present invention is to provide flexible and scalable access to the Internet-based applications by any of the diverse devices currently used, without hampering a

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user's access therein. As mentioned above with reference to Applicants' originally filed specification, this purpose and functionality are clear from Applicants disclosure.

In order to accomplish the purpose, the present invention provides a system including an Application Mediation Interface (AMI) component, a Device Mediation Interface (DMI) component and a broker module. The broker module communicates with the DMI component and the AMI component, the DMI component communicates with the multiple types of end user devices, and the AMI component communicates with Internet-based applications through the Internet. The system including the AMI component according to the present invention is implemented between the end user devices and the Internet. As can be seen from Applicants' Figure 2, a device module 40 (which corresponds to the DMI component), brokers 30A - 30D (which correspond to the broker) and an application module 20 (which corresponds to the AMI component) are implemented between multiple types of end user devices 50A - 50D and multiple Internet-based applications 10A - 10D.

Claim 1 as now amended clearly requires "A system for enabling multiple types of end user devices to access multiple Internet-based applications through the Internet, said system comprising: - an Application Mediation Interface (AMI) component for communicating with said Internet-based applications through the Internet; - a Device Mediation Interface (DMI) component for communicating with said end user devices; and - a broker module for communicating with said DMI component and with said AMI component, ..."

The Examiner has asserted that Hawkins teaches a system for enabling multiple types of end user devices. Applicants respectfully disagree.

Hawkins discloses that method and apparatus for wireless Internet access device. The purpose and function of Hawkins is to wirelessly transmit as much web-page content as possible across a low-bandwidth radio link via compression techniques and thin browsing. Further, the devices in Hawkins are only wireless communications devices (e.g., pagers) (see the abstract and paragraphs [0008] and [0083] of Hawkins). Applicants respectfully submit that Hawkins does not show or fairly suggest the system in accordance with Claim 1 that can enable multiple end user devices, which are different types of existing end user devices, to

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access any one of several Internet-based applications especially where the devices are not limited to wireless communications devices.

The Examiner has asserted that the AMI component of Claim 1 is equivalent to the CGI (Common Gateway Interface) 142 of Hawkins. Applicants respectfully disagree. In Hawkins, the web server 140, in particular the CGI 142, sends the HTML page 144 in the HTTP response 136 (see paragraph 0126). Thus, the CGI 142 is implemented in the web server 140. However, page 3, lines 14 - 18 of Applicants' originally filed specification states that:

"The first layer is an AMI (Application Mediation Interface) component directly connected with the application. This application component is able to directly access any data stored by the application."

Claim 1 of the present application recites that "said AMI component receives requests from said broker module and transmits replies to said requests to said broker module based on original data from said application." The AMI component of Claim 1 accesses data stored by the Internet-based application and transmits replies to the broker module based on original data from the application. Thus, the AMI component is not used to provide HTML pages in response to HTTP queries in the web server.

The Examiner has asserted that the DMI component of Claim 1 is equivalent to a message formatting layer 620 of Hawkins, Figure 1. Applicants respectfully disagree. In Hawkins, a wireless client 405 shown in Figures 4 and 5 is a particular wireless communication device 100 (see paragraph [0262]) and the wireless client 405 processes resources (i.e., software) 600 shown in Figure 6, the actual software layers of which are present on the wireless client 405 (see paragraph [0243]). The message formatting layer 620 converts CML messages from the network into a format compatible with the wireless communications device 100 e-mail application (see paragraph [0245]). Thus, the message formatting layer 630 is implemented within the client's wireless communications device 100 and converts the format of the messages into a format compatible with only the device 100 implementing that message formatting layer 620. In contrast, Applicants respectfully submit that the DMI component of the present invention is included in the system as required by Claim 1 and communicates with

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the multiple types of end user devices. The DMI component converts end data received from the broker module into a format suitable for an end user device. Thus, the DMI component is not implemented in the end user device and converts end data into a format suitable for any of the varied types of end user devices connected thereto.

Accordingly, the system in accordance with the present invention of Claim 1 allows any of the diverse devices currently used to perform flexible and scalable access to the Internet-based applications through the Internet, without hampering a user's access therein. In contrast, the method and apparatus disclosed by Hawkins allow only wireless communications devices to wirelessly access web-page content. Thus, the present invention defined by Claim 1 is not disclosed or suggested in Hawkins and provides clear and distinct advantages which are not obtained by Hawkins. Accordingly, Applicants respectfully submit that Claim 1 is allowable.

New independent Claim 11 is a rewritten claim of cancelled Claim 5, with improved terminology and to be clarified. The subject matter of Claim 11 is defined by similar features of Claim 1. Applicants respectfully submit that for the same reasons as Claim 1, Claim 11 is patentably differentiated from Hawkins. Accordingly, Applicants respectfully submit that Claim 11 is allowable.

Rejection of Claims 2 - 4 and 6 - 7 under 35 USC § 103(a)

The Examiner has rejected Claims 2 - 4 and 6 - 7 as being obvious by Hawkins in view of Brandt et al. (US Pat. No. 6,377,993).

Claims 2 and 4 have been amended for clarification with improved terminology. Claims 2 - 4 depend directly or indirectly from Claim 1 with limitations to the features thereof. As discussed above, Claim 1 is believed to be patentably differentiated from Hawkins. Accordingly, the session manager and authentication manager suggested by Brandt et al. fails to make Hawkins any more applicable to the instant claim. As as Claim 1 is believed allowable, Claims 2 - 4 properly depending therefrom are also respectfully submitted to be allowable.

Original Claims 6 - 7 have been cancelled thus obviating their rejection.

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New Claims 8 - 10 depend directly or indirectly from Claim 1 with limitations to the features thereof. The feature of the DMI component being for communicating with each of said end user devices requiring different data formats is supported by the disclosure of page 7, lines 8 - 16 and page 8, lines 10 - 32. The feature of Claim 9 of multiple brokers is supported by the disclosure of page 6, line 32 - 33 and Figure 2. The feature of Claim 10 of one broker corresponding to one Internet-based application is supported by the disclosure of page 6, line 25 - page 7, line 1. Applicants respectfully submit that Claims 8 - 10 are also allowable.

New Claims 12 and 13 are rewritten claims of cancelled original Claims 6 and 7, respectively, with improved terminology and to be clarified. New Claim 14 is directed to a method performed by a system defined by Claim 10. Claims 12 - 14 depend directly or indirectly on Claim 11 with limitations to the features thereof. Accordingly, Applicants respectfully submit that Claims 12 - 14 are also allowable.

New Claims 15 - 19

Claims 15 - 19 have been added. The subject matter of Claim 15 is directed to a method for the integration of end user devices for accessing Internet-based applications. The method includes the steps of providing multiple Internet-based applications and providing multiple types of end user devices for accessing the multiple Internet-based applications through the Internet as well as the steps equivalent to the features of Claim 11. For the same reasons as Claim 11, Applicants respectfully submit that Claim 15 is also allowable. Claims 16 - 19 depend directly or indirectly on Claim 15 with limitations to the features thereof and thus, Claims 16 - 19 are also allowable.

No fee is believed due for this submission. However, Applicant authorizes the Commissioner to debit any required fee from Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP. The Commissioner is further authorized to debit any additional amount required, and to credit any overpayment to the above-noted deposit account.

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It is submitted that this application is now in condition for allowance, and action to that end is respectfully requested.

Respectfully submitted,

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